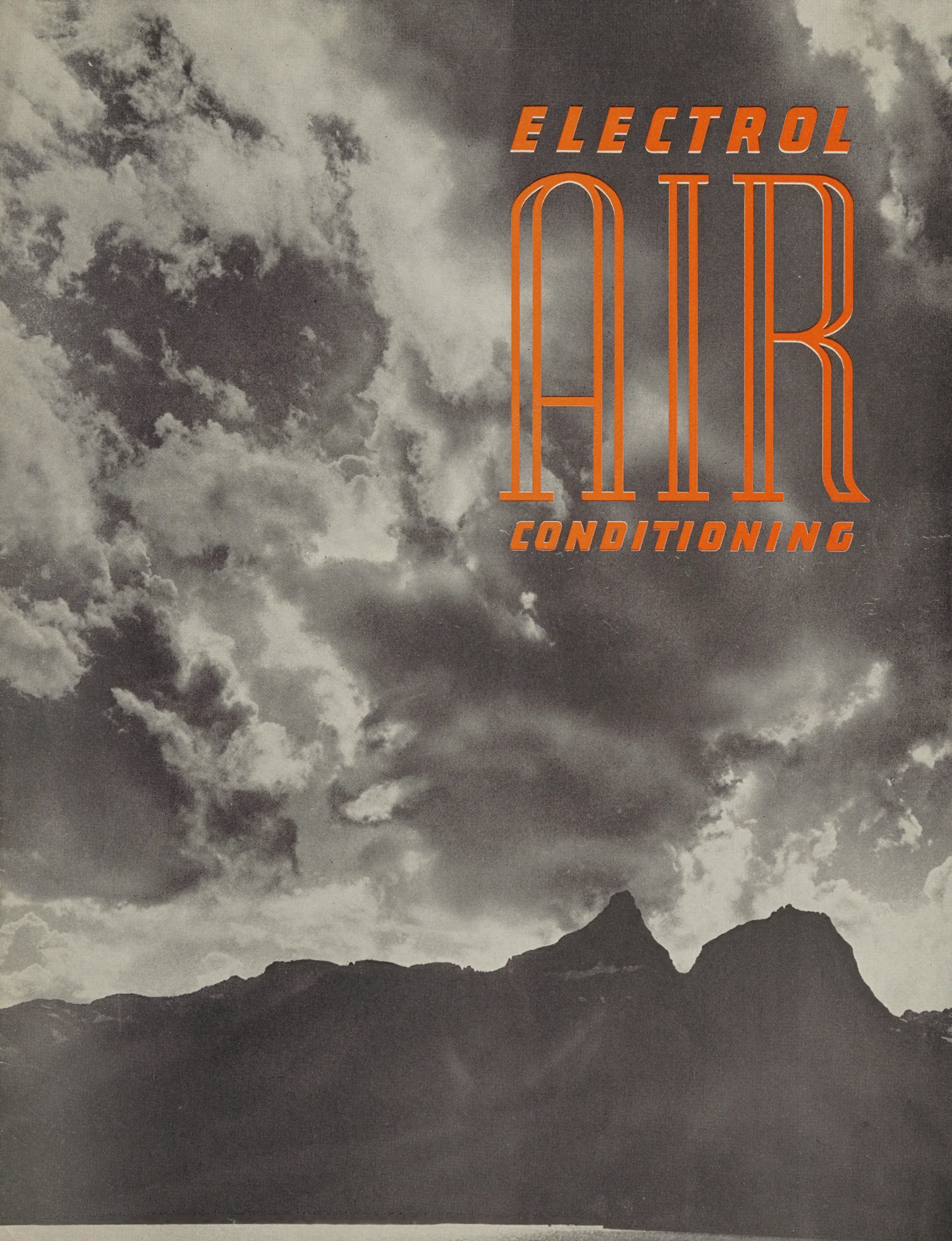
ELECTROL AIR CONDITIONING



LET'S HAVE A FRANK TALK ABOUT AIR CONDITIONING YOUR HOME

AIR CONDITIONING YOUR HOME NEED NOT BE EXPENSIVE ● *YOU CAN DO IT STEP BY STEP*

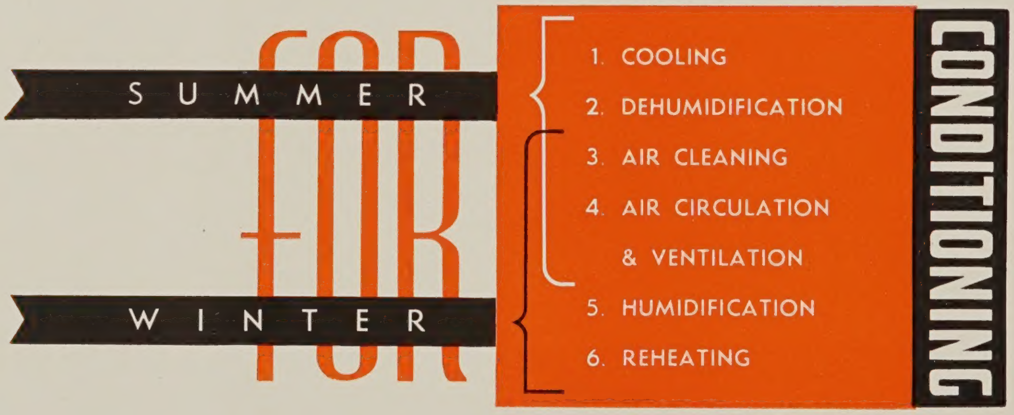
Perhaps you, like many people who want the comfort of air conditioning in their homes, think it necessary to make an immediate heavy investment . . . to start off by buying a basement full of elaborate equipment.

Such is far from the case.

Electrol—the most famous name in oil heating—now makes it possible for you to air condition your home step by step, to add equipment piece by piece, as your needs and your pocketbook warrant.

Complete Air Conditioning

To air condition your home **completely**—for both Summer and Winter—you must have equipment that will perform these six functions automatically:



SUMMER

FOR

WINTER

1. COOLING
2. DEHUMIDIFICATION
3. AIR CLEANING
4. AIR CIRCULATION & VENTILATION
5. HUMIDIFICATION
6. REHEATING

CONDITIONING

The elements common to both summer and winter air conditioning are the air cleansing, circulation and ventilation—items 3 and 4 on the chart above. The equipment necessary to perform these functions is a blower unit, with air filters and ducts. This unit cleans the air and circulates it throughout your house.

It is of the utmost importance that this blower unit and the ducts are properly proportioned to provide ample air capacity if your home is to be successfully and economically conditioned for either or both the summer and winter seasons.

Experience has shown that winter air conditioning demands a minimum of $4\frac{1}{2}$ to 6 air changes per hour for good results. For summer cooling, on the other hand, from 6 to 7 air changes per hour are needed. Therefore, if you decide—from considerations of first cost or otherwise—to start with simple winter air conditioning equipment, **be sure** that the capacities of the blower unit and the ducts are sufficient to provide at least six changes of air per hour so that, when you are ready to add complete summer cooling equipment later on, you will get efficient and satisfactory results without having to make troublesome and expensive changes to the equipment.

We repeat: Since you will undoubtedly want to complete the air conditioning of your home someday by the addition of summer cooling equipment, **insist upon and be sure you get** a blower unit and duct work of sufficient capacity to handle the cooling equipment when it is installed.

SUMMER COOLING

It should be borne in mind that winter air conditioning equipment by itself will provide a certain measure of cooling in hot weather by means of air circulation and ventilation. The movement of air by the blower unit through your home removes the blanket of heated air which lies near the ceilings of your rooms in hot weather, replacing it with cooler outside air. In addition, the air movement relieves discomfort by causing a more rapid evaporation of body moisture and producing an effect similar to that created by the breeze of an electric fan or from riding in an open car, except that proper placing of the grilles eliminates the disadvantages and dangers of direct drafts.

In many parts of the country the number of days when the temperature is hot enough to warrant artificial cooling is only about 15 or 20; and in these localities the expense of summer cooling equipment may, if so desired, be avoided by using winter air conditioning equipment of sufficient capacity to provide the necessary number of air changes per hour to give a cooling effect.

The essentials of winter air conditioning—in addition to air cleansing, circulation and ventilation—are Heat and Humidity, automatically controlled. Assuming that you already have automatic heat in your home, let us consider the application of air conditioning equipment to homes now heated by means of warm air registers or radiators.

ROOM CONDITIONING HEAT UNIT • COOLING UNIT
DIRECT FIRED FURNACE CONDITIONER
STEAM OR HOT WATER HEATING PLANT
WARM AIR FURNACE

IF YOU HAVE

ELECTROL F.C. SERIES

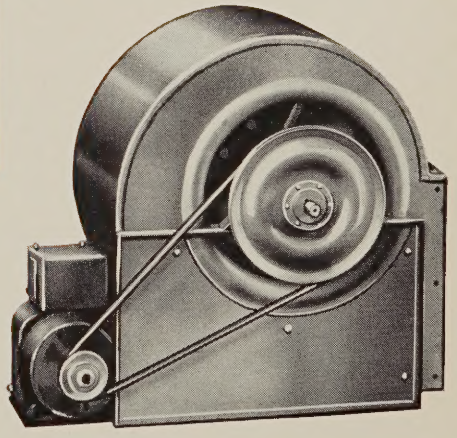
If you now heat your home with an automatically fired warm air furnace, the addition of winter air conditioning equipment is relatively simple and inexpensive.

An Electrol Blower Unit, attached to your present furnace, will filter the air, humidify it and circulate it throughout your home. If your furnace is properly sized and installed no changes should be necessary in your present duct work. However, before an Electrol Blower Unit is installed in your home, an engineering survey will be made and, if the present duct work is not of sufficient capacity to handle the necessary air changes per hour as provided by the blower, then recommendations for increasing the capacity of the ducts will be submitted. These changes, if needed, are in most cases relatively inexpensive, when limited to the first floor.

DIMENSIONS

Model	Height	Width	Length	Outlet Length	Outlet Width	Inlet Length	Inlet Width	Approximate Shipping Weight
FC 1	31½″	28″	34½″	14½″	12″	24″	18″	170
FC 2	34½″	30½″	34½″	14½″	13⅝″	24″	18″	250
FC 3	37½″	33½″	40″	17½″	15⅜″	30″	18″	350
FC 4	37½″	33½″	42½″	19½″	18⅝″	30″	24″	400

(Right) The type of blower used on the FC Series Blower Unit.



A WARM AIR FURNACE

More Comfortable, Economical Heating

The Electrol Blower Unit is sturdy in construction, simple and economical in operation. A fan draws the air through an efficient filter that removes all dust and impurities and circulates the warm, clean and moist air evenly and without drafts throughout the house. The humidifying spray is located in the jacket of your furnace and the amount of moisture injected into the air is automatically governed by a Humitrol located upstairs in the living quarters of the house.

You will find that heating with the Electrol Blower Unit attached to your present warm air furnace is not only more comfortable, but actually more economical. This is because its forced air circulation eliminates cold corners and heat stratification; and also, by maintaining the proper amount of moisture in the air, lowers the temperature at which it is necessary to keep your home in order for you to feel comfortable. Dry air causes rapid evaporation of body moisture, producing a cooling sensation even though the actual room temperature may be very high. On the other hand, properly moistened air will give a greater degree of comfort at temperatures several degrees lower.

During the summer months the Electrol Blower Unit will provide some relief from the heat because the fan will circulate clean air throughout the house—removing the blanket of heat near the ceilings and permitting more rapid evaporation of body moisture, without dangerous drafts.

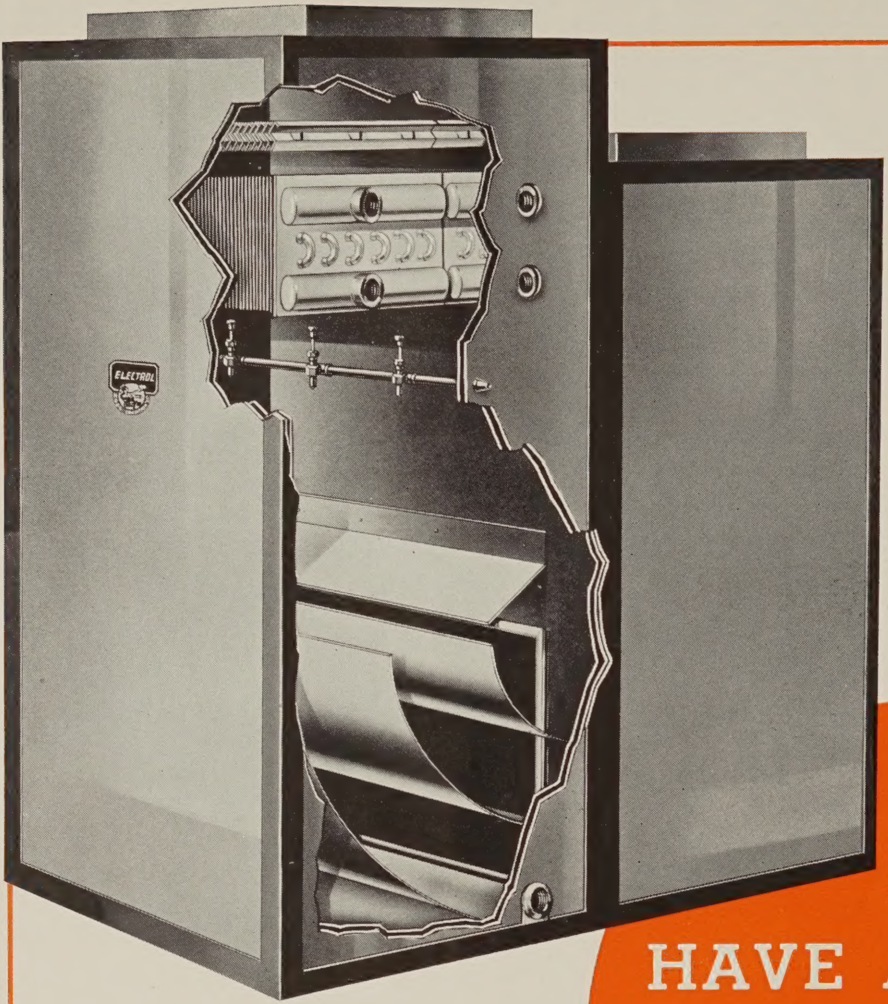
If definite cooling and dehumidifying equipment is wanted for the summer it can be readily added at any time, without making expensive changes in the equipment which has been properly proportioned at the time of installation to take care of this load.

Capacity Table—Electrol Gravity Warm Air Conversion Units—Series F.C.

Model	C.F.M.	Outlet Velocity F.P.M.	FAN SPEED		Motor H.P.	FURNACE DATA		
			S.P. 1/8″	S.P. 1/4″		Furnace Size	Gravity Pipe Area Rating Sq. In.	B.T.U. Per Hour
FC 1	1000	900	475	555	1/6	22″-24″	450- 550	61000- 75000
FC 2	1400	1100	466	530	1/4	26″-28″	700- 820	95000-112000
FC 3	2000	1100	400	455	1/3	29″-30″	990-1150	135000-157000
FC 4	2500	1000	325	375	1/3	32″-34″	1270-1400	172000-190000

(At right) This device humidifies the heated air in the free air space of the furnace chamber. It is inserted in the furnace jacket and connected to the water supply.

ELECTROL HUMIDIFIER
(SPRAY TYPE)



ELECTROL S-S SERIES
("SPLIT-SYSTEM")
AIR CONDITIONING

IF YOU HAVE A STEAM OR HOT WATER HEATING PLANT

If your home is radiator-heated, with an automatically operated steam or hot water heating plant, an Electrol Split System Air Conditioner can be used with very satisfactory and economical results. This unit is attached to your present boiler.

"Split System" is the term used when part of the house is heated with conditioned air, and part with radiators. This system has certain definite advantages.

Conditioning Part of Your Home

The Electrol Split System Air Conditioner consists of a blower unit, containing circulating fan, air filters, humidifier and heating coil. After an engineering survey of your home has been made to determine the proper size of conditioner required to give the necessary air changes per hour, the radiators are removed from rooms to be conditioned, and the necessary grilles and duct work installed. It is usually fairly expensive to run ducts to the upper floors of a house that is already built and for that reason it is generally advisable to air condition only the living quarters on the lower floor of the house (or at most a master bedroom upstairs).

In this case, the second story, as well as such rooms as kitchen, bathroom, servants' quarters, etc., are heated with radiators as before, thereby effecting a definite saving in installation cost.

Even though only the lower floor of the house may be air conditioned this, nevertheless, has a definitely beneficial effect throughout the whole house, since the forced circulation of air extends up through the stair wells and makes its benefits felt on the upper floors.

In the Summer, the Electrol Split System Air Conditioner will provide a cooling effect by running the blower unit to circulate clean, cool air in the rooms equipped. This removes the layer of hot air near the ceilings and quickly establishes outside temperatures. Moreover, this air circulation, without drafts, permits more rapid evaporation of body moisture, producing a sensation of coolness and relieving discomfort.

Where lower floors only are equipped, the addition of an attic fan can be made to draw heated air from bedrooms and maintain circulation of cooler outside air.

Should summer weather conditions in your part of the country make the installation of definite cooling and dehumidifying equipment advisable at a later date, a refrigeration coil and dehumidifier can be added to your Electrol Split System Air Conditioner at any time. By planning for this possible addition of cooling equipment at the time the conditioner is first installed, and making the blower and the duct work of ample capacity to provide the necessary air changes per hour, needless changeover expense will be eliminated.

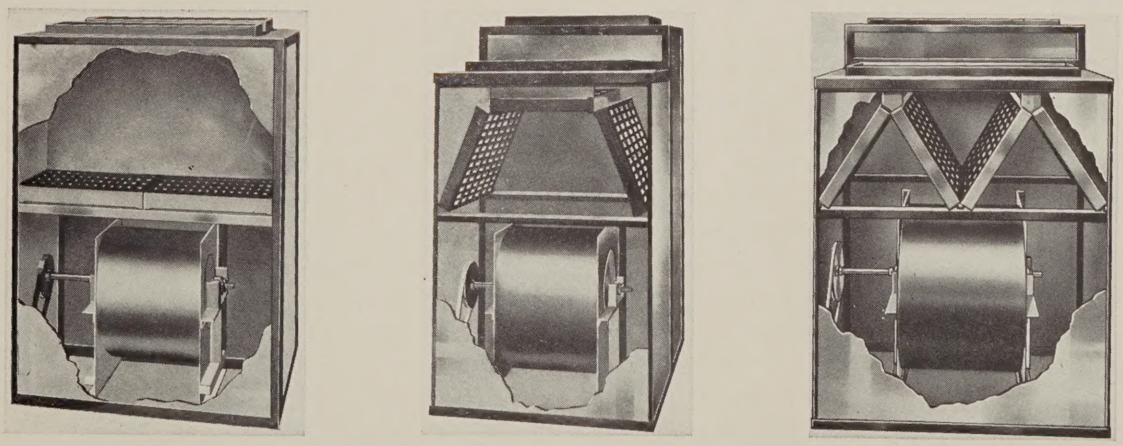
Capacity Table—Electrol Split System Air Conditioner Units—Series SS

MODEL	HEATING CAPACITY BTU PER HOUR		Sq. Ft. E.D.R. 180° H.W.	Sq. Ft. E.D.R. Steam	AIR CAPACITY				B.T.U. PER HOUR COOLING CAPACITY	
	Hot Water 180°	Steam 1 lb. Pressure			CFM	WGS	Fan Speed	Motor H.P.	40° Water	50° Water
SS 1	86000	87500	570	365	1120	⅜"	716	¼	34250 6GPM	22000 6GPM
SS 2	155000	162000	1030	675	2000	⅜"	558	⅓	64500 12GPM	40500 12GPM
SS 3	206000	217000	1370	900	2700	½"	656	½	84500 10GPM	54400 10GPM
SS 4	240000	307000	1600	1275	3600	½"	630	¾	98500 12GPM	61400 12GPM

DIMENSIONS

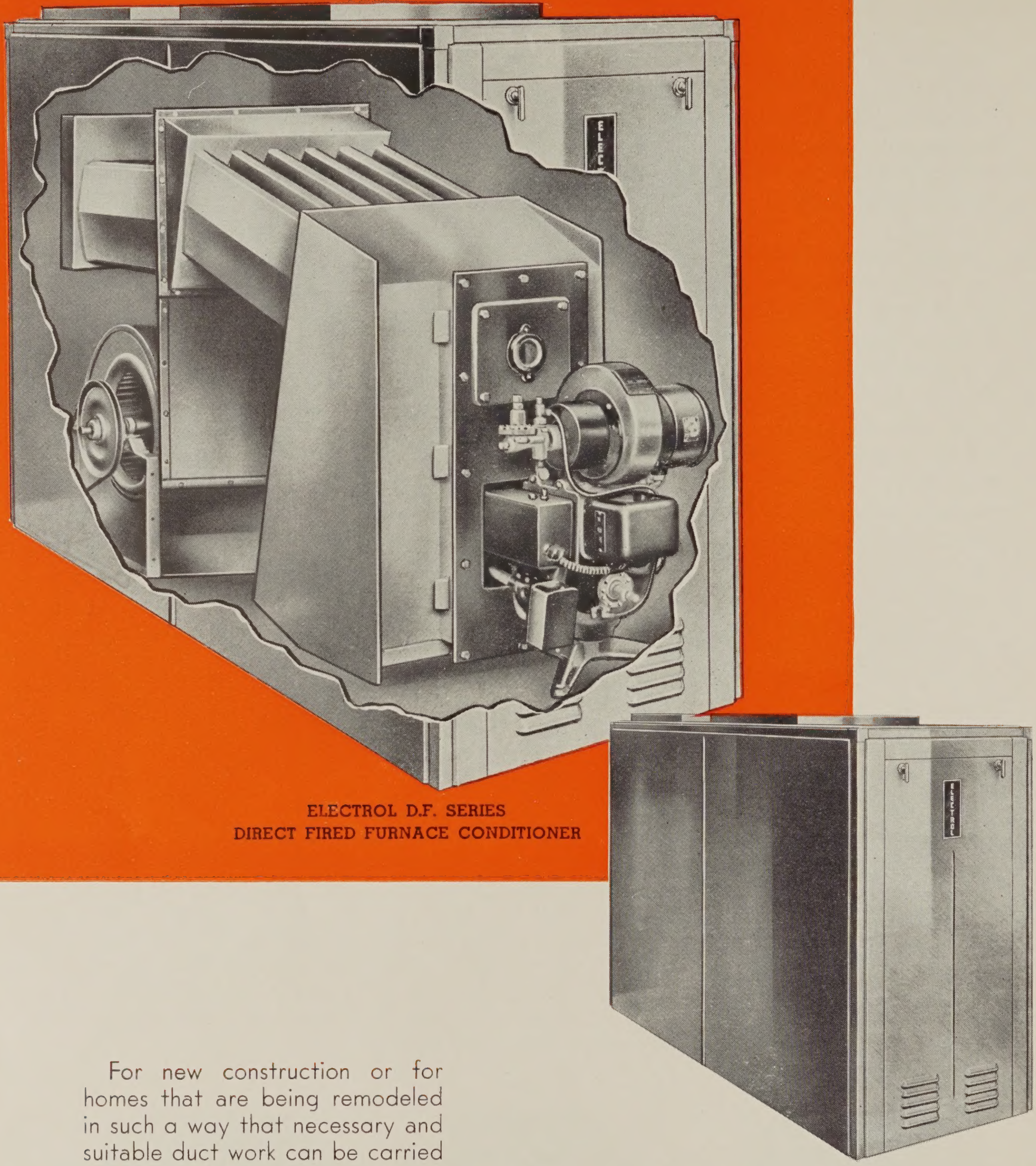
MODEL	Height	Width	Length	Outlet Length	Outlet Width	Inlet Length	Inlet Width	Approximate Shipping Weight
SS 1	48½	41¾	35½	26	10½	26	12	600
SS 2	60½	58¾	35½	26	20	26	20	900
SS 3	60½	56⅜	51½	40	20	40	20	1200
SS 4	60½	63⅝	59¼	60	21¾	60	21½	1500

Height of outlet and inlet collars for Duct Connections 1½"



Illustrations above show intake sections of the Electrol S-S Series conditioners. Air enters at top and passes through filters and is forced into heating and humidifying chamber by motor driven fan.

DIRECT FIRED FURNACE CONDITIONER



ELECTROL D.F. SERIES
DIRECT FIRED FURNACE CONDITIONER

For new construction or for homes that are being remodeled in such a way that necessary and suitable duct work can be carried to all parts of the house, a direct-fired winter air conditioner can be furnished, and such a unit can, where required, be provided with equipment for summer air conditioning in addition to winter. The direct-fired air conditioner has many advantages where it can be suitably and economically installed in lower first-cost, with an operation that, with the high efficiency of the modern, Electrol Model DF Conditioner, has all the advantages of the most elaborate system, provided the duct work and size and location of registers are correctly engineered.

ROOM CONDITIONING HEAT UNIT • COOLING UNIT

DIRECT FIRED FURNACE CONDITIONER

A modern automatic oil fired warm air furnace providing complete winter air conditioning with means for adding summer air conditioning if desired—

The Electrol Model DF Conditioner

1. Heats the air and automatically maintains the temperature for which it is set.
2. Thoroughly cleanses the air by means of efficient renewable air filters.
3. Positively circulates the air by means of a motor operated blower of ample capacity.
4. Humidifies by means of a patented spray device giving the most complete diffusion known to date.

The Electrol Model DF Conditioner offers high efficiency winter air conditioning at the lowest possible cost both as to installation and operation. It is fired with the famous Electrol Automatic Oil Burner, noted during nearly twenty years for its remarkable economy and long trouble free, dependable life.

The Electrol Model DF Conditioner is made standard in four sizes (larger sizes can be made to order) and the capacities as shown in the table below are guaranteed, as is an overall efficiency of over 80% when conditioners are operated at rated capacities.

Because of the ample heat transfer surface provided, the special design insuring thorough contact of the air currents with these surfaces, the location of the fired gas passages in the incoming air chamber and the ample amount of air forced through the unit, low grille temperatures are maintained.

These low grille temperatures in combination with low velocity air, a result of the ample air volume, assure a maximum of comfort in the absence of "hot spots" and "draughts,"' and in conjunction with a properly designed duct system, make possible a satisfactory, well balanced air conditioning plant.

The Electrol Model DF Conditioner is properly designed. It is not an old style warm air furnace of comparatively low efficiency promoted to the title of an "air conditioner" by the addition of a blower unit.

A feature of importance resulting from the correctness of design is the ability of this unit in combination with correctly designed and installed duct work to adequately handle the ventilation of the building at all times without prejudice to personal comfort.

Throughout the entire design of the Electrol DF Conditioner, the years of experience of Electrol Engineers have been applied to correctly develop the smaller details that mean so much in the day-by-day satisfactory functioning, efficiency and service—such for instance, as the easy access to the furnace unit for cleaning, passing of air under the furnace chamber and the provision of air capacities that will give the necessary air changes to permit of satisfactory cooling and de-humidification during the summer where duct work is suitably designed and installed.

The Furnace Unit is enclosed in a beautiful jacket, that will greatly add to the attractiveness of a basement. Its standard light beige color harmonizes with almost any basement color-scheme.

CAPACITY TABLE—ELECTROL WARM AIR FURNACES—SERIES D.F.

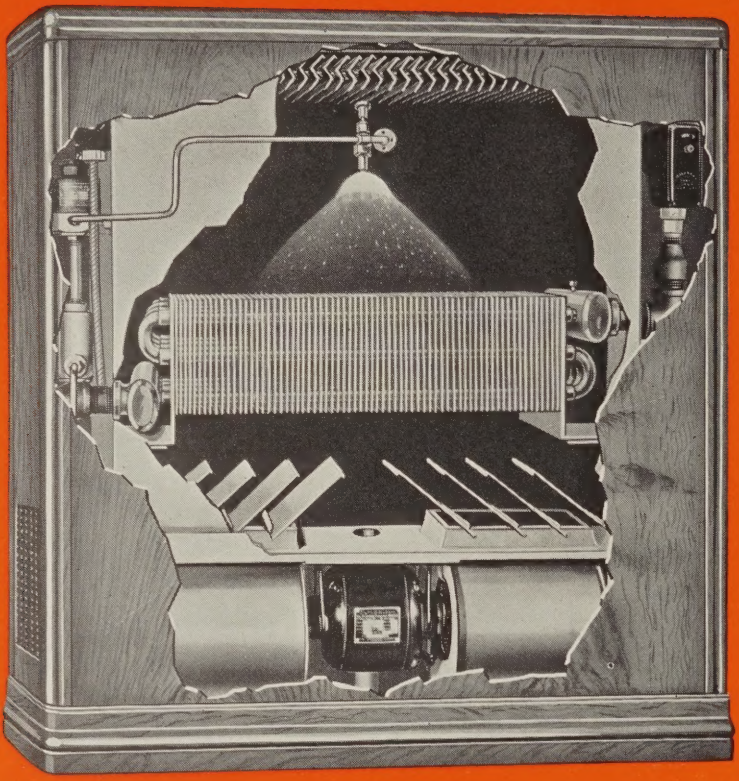
Model	BTU Per Hour at Bonnet	BTU Per Hour at Grilles	Air Temp. at Bonnet	Oil Rate lbs. 1 Hr.	HEATING SURFACE			AIR CAPACITY			
					Primary	Secondary	Total	CFM at 70°	S.P.	Fan Speed	Motor H.P.
DF 1	120,000	100,000	145-165	8.65	24	54	78	1450	¼"	603	¼
DF 2	150,000	125,000	145-165	9.70	24	57	82	1650	¼"	500	⅓
DF 3	175,000	145,000	145-165	11.90	24	61	86	1850	¼"	513	½
DF 4	225,000	185,000	145-165	14.40	24	86	110	2450	¼"	428	¾

DIMENSIONS

Model	Height	Length	Width	Outlet Width	Outlet Length	Inlet Width	Inlet Length	Approximate Shipping Weight
DF 1	56½	92½	33½	24	28	24	20	1400
DF 2	56½	92½	33½	24	30	24	24	1600
DF 3	56½	92½	33½	24	30	24	24	1800
DF 4	60½	97½	35½	24	32	24	28	2000

Height of outlet and inlet collars for Duct Connections 1½"

ROOM CONDITIONING • HEATING UNIT



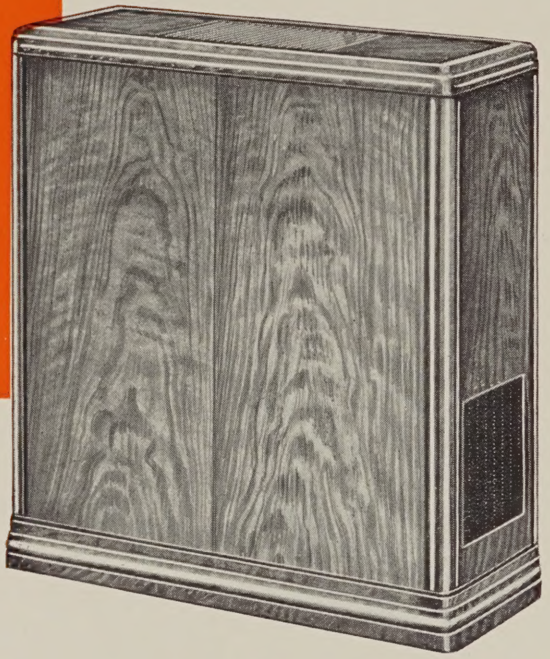
SERIES SSJ
ELECTROL UNIT ROOM CONDITIONER

CAPACITY TABLE (Per Hour)

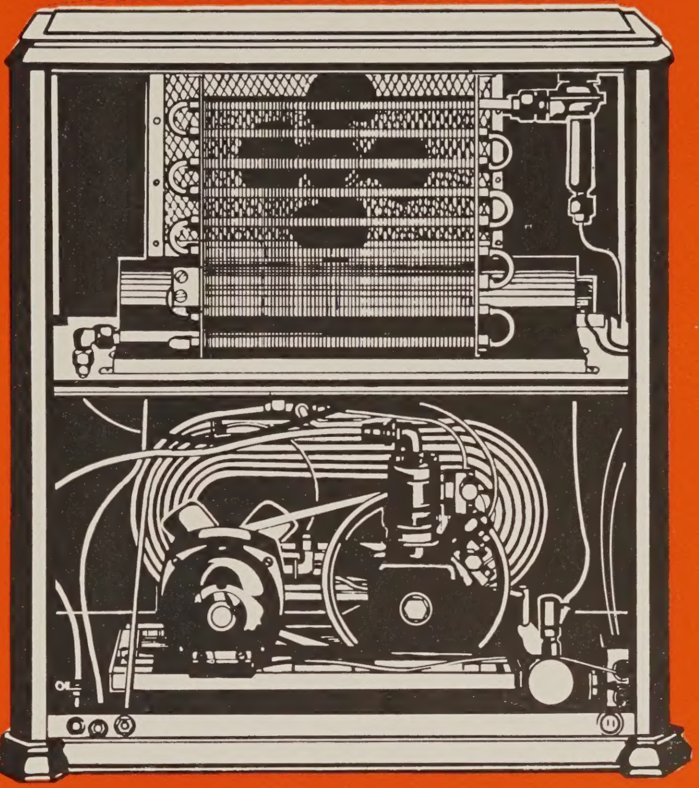
Heating & Humidifying	Cooling
Steam 1 lb. Press. 39,200 BTU 4 gals.	Air Capacity, 350 CFM. Fan Speed, 1140 RPM. Motor HP 1/30
Hot Water 120° 14,200 BTU 1 gal. 150° 21,600 BTU 2 gals. 180° 31,000 BTU 3 gals.	Water at 40 (2 GPM) 8000 BTU Water at 50 (3 GPM) 4800 BTU

If changes, as elaborate as the foregoing, are not desirable for any reason, either on account of structural difficulties or expense, unit conditioners can be provided of different sizes that will circulate, filter and humidify the air in one or more rooms, at the same time providing the necessary heat, and sub-units can be added to additional rooms from time to time, or a complete scheme for each room can be carried out with practically no structural changes, except insofar as the necessary electrical circuits are concerned—these, of course, are much less expensive than the duct work necessary for the split system, the unit taking the place of an existing radiator.

These same unit conditioners, where waters of suitable temperature is available, or by providing a suitable cooling medium, can be used in summer time for individual room cooling. Where there is an existing heating plant, either steam or hot water, conditioning can be materially improved at a minimum of first-cost, by the installation of a basement unit of the Model SSJ, and varying capacities of this type of unit will shortly be in production. With this modified form of air conditioning, the existing radiation will be used to provide the necessary heating. The duct work will be run to those rooms in which conditions are to be improved, and by means of the Model SSJ, air that has been cleaned and humidified will be circulated in such rooms for winter conditioning, sufficient heat being applied in the conditioner to eliminate any possibility of cold drafts. With this same equipment, by the provision of the necessary cooling units, such rooms could also be cooled and dehumidified in summer. Satisfactory humidification can be obtained for the whole house with this type of unit.



ROOM CONDITIONING • COOLING UNIT



ELECTROL RC SERIES
UNIT ROOM COOLER

In those cases where summer air conditioning only is desired, self-contained units can be provided for cooling, de-humidifying, air cleansing and circulating the air in a room, and just as with the units on the opposite page, the summer air conditioning can be multiplied for any number of rooms in a home. For these units it will be necessary to run water-piping in addition to electrical circuits.

On the Electrol RC Series Unit Room Cooler the fan is of the oscillating type, giving the best possible circulation of the conditioned air. The refrigerating mechanism is independent of the rest of the machine and may be turned off or on at will by a small switch.

ELECTROL UNIT ROOM COOLER – SERIES R.C.

Model	Height	Length	Width	Compressor Speed	BTU Extraction @ 83°F.			Motor HP	CFM
					Total	Sensible @ 80% R.H.	Latent @ 80% R.H.		
RC 1	34	36	18	650	2960	1630	1330	¼	480-520
RC 2	34	36	18	500	7164	3834	3330	½	500-575

With regards to capacity, Model 1 normally handles 2500-3000 cu. ft. contained space and Model 2—6000-7000 cu. ft. but of course these capacities vary somewhat with exposure, number of occupants and other local conditions.

ELECTROL -- THE IDEAL AIR CONDITIONING EQUIPMENT -- ENGINEERED TO SUIT YOUR REQUIREMENTS

For nearly twenty years Electrol has been the most famous name in the oil heating industry. Electrol Oil Burners and Electrol Complete Oil Furnaces are known the world over for their outstanding dependability and economy. Electrol engineers are heating engineers and now, after long research and investigation, they bring you a complete line of the finest air conditioning equipment it is possible to buy.

Electrol and Electrol dealers do not believe in selling an air conditioning job that is not "right"—that will not do what you expect of it—that is undersized and incapable of being expanded without costly alterations. Before we will make an installation in your home—or even quote you a price—our engineers must make a preliminary survey of your home, determine exactly the proper type and size of equipment necessary to do the job you want done. Only in this way can we be sure that you will be satisfied . . . and for nearly two decades Electrol's reputation has been built on its record of satisfied users.

Any Electrol dealer or Factory Branch Office will be glad to make a survey of your home and submit their recommendations and estimate. This service is entirely free and home owners, architects and engineers are invited to avail themselves of this planning and layout service without the slightest obligation.

You are going to air condition your home eventually. Why not do it the Electrol way, step by step—and make the first step now. Ask for an Electrol engineer—you can rely on what he tells you.

ELECTROL INCORPORATED

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The More You Mention
THE ARCHITECTS SAMPLES CORPORATION
The More Manufacturers File Samples, and
The More Complete Our Service To You

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